Table 6.1 – Electric Net Summer Capability (All Sectors)

(Gigawatts)

	1980	1990	2000	2001	2010	2020	2025
Coal [1]	NA	307.4	316.0	316.2	316.3	353.1	380.5
Petroleum/Natural Gas [2]	NA	220.4	283.8	323.5	415.5	522.1	588.9
Total Fossil Energy	444.1	527.8	599.8	639.7	731.8	875.2	969.4
Nuclear	51.8	99.6	97.9	98.1	99.3	99.6	99.6
Hydroelectric Pumped Storage [3]	NA	19.5	19.5	19.5	20.3	20.3	20.3
Conventional Hydroelectric	81.7	73.9	79.4	79.4	80.01	80.01	80.01
Geothermal	0.9	2.7	2.8	2.8	3.54	5	5.64
Wood [4]	0.1	5.5	6.1	6.2	7.95	9.94	11.49
Waste [5]	NA	2.5	3.9	3.9	4.31	4.65	4.65
Solar Thermal and Photovoltaic	NA	0.3	0.4	0.4	0.92	1.37	1.79
Wind	NA	1.8	2.4	4.1	8.47	11.05	12
Total Renewable Energy	82.7	86.8	94.9	96.7	105.2	112	115.59
Other[6]	NA	0.5	0.5	0.5	0.8	0.9	0.9
Total Electric Capability	578.6	734.1	812.7	854.7	959.3	1118.2	1221.5

Sources: EIA, *Annual Energy Outlook 2003,* DOE/EIA-0383 (2003) (Washington, D.C., January 2003), Tables A9, A17; EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, D.C., November 2002), Table 8.7a.

Notes:

Data include electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for net summer capacity at electric utilities only. Beginning in 1989, data also include net summer capacity at independent power producers and the commercial and industrial (end-use) sectors.

[1] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

[2] Petroleum, natural gas, distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, supplemental gaseous fuels, blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels. Includes natural gas fired distributed generation.

[3] Pumped storage included in Conventional Hydro prior to 1989.

[4] Wood, black liquor, and other wood waste. Includes projections for energy crops after 2010.

[5] Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass. Waste included in Wood prior to 1985.

[6] Includes batteries, chemicals, hydrogen, pitch, sulfur, purchased steam, and miscellaneous technologies.

Table 6.2 – Electricity-Only Plant Net Summer Capability

(Gigawatts)

	1980	1990	2000	2001	2010	2020	2025
Coal [1]	NA	299.9	305.8	306.0	306.4	343.2	370.6
Petroleum/Natural Gas [2]	NA	198.7	244.0	276.9	356.6	458.2	520.5
Total Fossil Energy	444.1	498.6	549.7	582.8	663.0	801.4	891.1
Nuclear	51.8	99.6	97.9	98.1	99.3	99.6	99.6
Hydroelectric Pumped Storage [3]	NA	19.5	19.5	19.5	20.3	20.3	20.3
Conventional Hydroelectric	81.7	73.3	78.2	78.3	78.9	78.9	78.9
Geothermal	0.9	2.7	2.8	2.8	3.5	5.0	5.6
Wood [4]	0.1	1.0	1.5	1.5	2.1	2.2	2.8
Waste [5]	NA	1.9	2.8	2.8	4.0	4.4	4.4
Wind	NA	0.3	0.4	0.4	0.5	0.8	0.9
Solar Thermal and Photovoltaic	NA	1.8	2.4	4.1	8.5	11.1	12.0
Total Renewable Energy	82.7	80.9	88.1	89.8	97.6	102.3	104.6
Other[6]	NA	0	0	0	0.1	0.2	0.2
Total Electric Capability	578.6	698.6	755.2	790.3	881.8	1,033.7	1,131.2

Sources: EIA, *Annual Energy Outlook 2003,* DOE/EIA-0383 (2003) (Washington, D.C., January 2003), Tables A9, A17; EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, D.C., November 2002), Table 8.7b.

Notes:

Data are for electricity-only plants in the electric power sector whose primary business is to sell electricity to the public. Historical data include electric utility combined-heat-and-power (CHP) plants. Through 1988, data are for net summer capacity at electric utilities only. Beginning in 1989, data also include net summer capacity at independent power producers.

[1] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

[2] Petroleum, natural gas, distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, supplemental gaseous fuels, blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels. Includes natural gas fired distributed generation.

[3] Pumped storage included in Conventional Hydro prior to 1989.

[4] Wood, black liquor, and other wood waste. Includes projections for energy crops after 2010.

[5] Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass. Waste included in Wood prior to 1985.

[6] Includes batteries, chemicals, hydrogen, pitch, sulfur, purchased steam, and miscellaneous technologies.

Table 6.3 – Combined-Heat-and-Power Plant Net Summer Capability

(Gigawatts)

	1980	1990	2000	2001	2010	2020	2025
Coal [1]	NA	7.5	10.1	10.1	9.9	9.9	9.9
Petroleum/Natural Gas [2]	NA	21.9	40.0	46.8	58.9	63.9	68.4
Total Fossil Energy	NA	29.2	50.1	56.9	68.8	73.8	78.3
Nuclear	NA	NA	NA	NA	NA	NA	NA
Hydroelectric Pumped Storage	NA	NA	NA	NA	NA	NA	NA
Conventional Hydroelectric [3]	NA	0.6	1.1	1.1	1.1	1.1	1.1
Geothermal	NA	NA	NA	NA	NA	NA	NA
Wood [4]	NA	4.5	4.6	4.7	5.9	7.8	8.7
Waste [5]	NA	0.6	1.1	1.1	0.3	0.3	0.3
Wind	NA	NA	NA	NA	NA	NA	NA
Solar Thermal and Photovoltaic	NA	NA	NA	NA	NA	NA	NA
Total Renewable Energy	NA	5.8	6.8	7.0	7.3	9.1	10.1
Other[6]	NA	0.5	0.5	0.5	0.7	0.7	0.7
Total Electric Capability	NA	35.5	57.4	64.5	75.9	82.8	88.2

Sources: EIA, *Annual Energy Outlook 2003,* DOE/EIA-0383 (2003) (Washington, D.C., January 2003), Tables A9, A17; EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, D.C., November 2002), Table 8.7c.

Notes:
Includes combined-heat-and-power (CHP) plants whose primary business is to sell electricity and heat to the public. For 1989-2001, does not include electric utility CHP plants—these are included in "Electricity-Only Plant Capability " in Table 6.2. Also includes commercial and industrial CHP and a small number of commercial electricity-only plants.

[1] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
[2] Petroleum, natural gas, distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, supplemental gaseous fuels, blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
[3] Includes combined-heat-and-power (CHP) plants that use multiple sources of energy including hydropower.
[4] Wood, black liquor, and other wood waste.
[5] Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
[6] Includes batteries, chemicals, hydrogen, pitch, sulfur, purchased steam, and miscellaneous technologies.

Table 6.4 – Regional Noncoincident [1] Peak Loads

(Megawatts, except as noted)

North American Electric Reliability Council Regions	1990	2000	2001	1990	2000	2001
	Summer Peak			Winter Peak		
ECAR	79,258	97,557	102,161	67,097	86,455	90,041
ERCOT	42,737	54,817	56,759	35,815	44,287	44,394
FRCC	0	37,728	38,478	0	40,894	42,208
MAAC	42,613	51,206	52,977	36,551	43,139	43,809
MAIN	40,740	51,271	55,368	32,461	39,742	43,663
MAPP (U.S.)	24,994	32,899	29,814	21,113	27,363	24,661
NPCC (U.S.)	44,116	53,450	54,270	40,545	45,170	45,650
SERC	121,149	151,065	159,930	117,231	134,488	139,459
SPP	52,541	39,383	40,522	38,949	28,375	29,804
WSCC (U.S.)	97,389	116,440	118,887	94,252	102,435	102,237
Contiguous U.S.	545,537	685,816	709,166	484,014	592,348	605,926
ASCC (Alaska)	463	NF	NF	613	NF	NF
Hawaii	NF	NF	NF	NF	NF	NF
U.S. Total	546,000	685,816	709,166	484,627	592,348	605,926
Capacity Margin (%) [2]	NA	14.6	16.5	NA	26.9	30.4

Source: EIA, *Annual Energy Review 2001,* DOE/EIA-0384(2001) (Washington, D.C., November 2002), Table 8.8.

Notes:

NF = data not filed

2001 data are forecast estimates.

[1] Noncoincident peak load is the sum of two or more peak loads on individual systems that do not occur at the same time interval.

[2] The percent by which planned generating capacity resources are expected to be greater (or less) than estimated net internal demand at the time of expected peak summer (or winter) demand. Net internal demand does not include estimated demand for direct control load management and customers with interruptible service agreements.

Table 6.5 – Electric Generator Cumulative Additions and Retirements

(Gigawatts) [1]

	2010	2020	2025
Cumulative Planned Additions			
Coal Steam	0	0	0
Other Fossil Steam [2]	0	0	0
Combined Cycle	63.1	63.1	63.1
Combustion Turbine/Diesel	27.8	27.8	27.8
Nuclear	0	0	0
Pumped Storage	0.3	0.3	0.3
Fuel Cells	0.1	0.2	0.2
Renewable Sources [3]	4.9	6.4	6.5
Distributed Generation [4]	0	0	0
Total Planned Additions	96.2	97.9	98.0
Cumulative Unplanned Additions			
Coal Steam	6.8	45.5	74.0
Other Fossil Steam [2]	0	0	0
Combined Cycle	46.1	129.3	171.4
Combustion Turbine/Diesel	12.3	40.0	61.9
Nuclear	0	0	0
Pumped Storage	0	0	0
Fuel Cells	0	0	0
Renewable Sources [3]	1.4	4.5	6.7
Distributed Generation [4]	1.7	10.1	15.8
Total Unplanned Additions	68.3	229.4	329.8
Cumulative Retirements			
Coal Steam	5.8	7.6	8.7
Other Fossil Steam [2]	48.9	55.1	56.1
Combined Cycle	0.5	0.5	0.5
Combustion Turbine/Diesel	9.4	12.6	13.4
Nuclear	1.8	2.8	2.8
Pumped Storage	0	0	0
Fuel Cells	0	0	0
Renewable Sources [3]	0.1	0.1	0.1
Total Retirements	66.5	78.7	81.7

Source: EIA, *Annual Energy Outlook 2003,* DOE/EIA-0383 (2003) (Washington, D.C., January 2003), Table A9.

Notes:

[1] Additions and retirements since December 31, 2001.

[2] Includes oil-, gas-, and dual-fired capability.

[3] Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, landfill gas, other biomass, solar, and wind power.

[4] Primarily peak load capacity fueled by natural gas.

Table 6.6 - Transmission and Distribution Circuit Miles

(Miles) [1]

Voltage (kilovolts)	1980	1990	1999	2000	2010
230	NA	70,511	76,762	76,437	80,515
345	NA	47,948	49,250	51,025	53,855
500	NA	23,958	26,038	25,000	27,343
765	NA	2,428	2,453	2,426	2,518
Total	NA	144,845	154,503	154,888	164,231

Sources: EIA, *Electricity Transmission Fact Sheets*, http://www.eia.doe.gov/cneaf/electricity/page/fact_sheets/transmission.html; NERC, *Electricity Supply and Demand Database*, 2002, ftp://www.nerc.com/pub/sys/all_updl/docs/pubs/2001broc.pdf.

Notes:

[1] Circuit miles of AC lines 230 kV and above.